

1. (Currently Amended) An atomizer Atomizer device for the production of a liquid-gas mixture (4), the mixture (4) produced preferably useful for being introduced for the purpose of compression into a nozzle arrangement (3) in which the kinetic energy of the mixture (4) is in large part converted into compression energy of the gaseous component, wherein the atomizer device (2) consists of comprising:

 a nozzle member (20) which includes having an at least approximately substantially central pipe (16) for the gaseous medium, and a rotationally symmetrical nozzle chamber (18) surrounding this the pipe (16) for the liquid medium, the and a nozzle aperture; and

 a liquid feed (17) has having means for producing a swirled liquid flow in the nozzle chamber (18), and;

 wherein the liquid in a nozzle aperture (19) coaxially enclosing encloses the pipe (16) emerges from the nozzle member (20).

2. (Currently Amended) An atomizer Atomizer device according to claim 1, wherein the liquid feed (17) opens tangentially into the nozzle chamber (18).

3. (Currently Amended) An atomizer Atomizer device according to claim 1 or 2, wherein the nozzle aperture is annular, and the nozzle chamber (18) tapers to an the annular nozzle aperture (19).

4. (Currently Amended) A method Method for the production of a liquid-gas mixture (4) by means of an atomizer device (2), the mixture (4) produced useful for being introduced, particularly for compression, into a nozzle arrangement (3) in which the kinetic energy of the mixture (4) is in large part converted into compression energy of the gaseous component, wherein the method comprising:

 causing a swirled liquid flow emerges to emerge from a nozzle aperture (19) of the atomizer device (2) and produces to produce a swirling hollow conical spray (21) expanding in the a flow direction, and to produce a reduced pressure zone within the spray; and

 causing the gaseous medium (13) enters to enter the reduced pressure zone via a

central feed (16) into the reduced pressure zone (22) formed within the hollow conical shaped spray (21).

5. (Currently Amended) A method Method according to claim 4, wherein comprising:

producing the swirled liquid flow is produced in a nozzle chamber (18)
surrounding the pipe (16) for feeding the gaseous medium central feed.

6. (Currently Amended) A method Method according to claim 5, wherein comprising:

introducing the swirled liquid flow in the nozzle chamber (18) is produced by means of through at least one liquid feed (17) opening tangentially into the nozzle chamber (18).